

\*  
FILE 'USPAT' ENTERED AT 10:50:09 ON 02 SEP 1997

\*  
\* W E L C O M E T O T H E \*  
\* U. S. P A T E N T T E X T F I L E \*  
\* \*

=> s 422/52,58,61,98,102/ccls  
233 422/52/CCLS  
1138 422/58/CCLS  
964 422/61/CCLS  
603 422/98/CCLS  
1366 422/102/CCLS  
L1 3659 422/52,58,61,98,102/CCLS  
(422/52 OR 422/58 OR 422/61 OR 422/98 OR 422/102)/CCLS)

=> s 435/4,6,7.1,7.2/ccls  
1169 435/4/CCLS  
2546 435/6/CCLS  
966 435/7.1/CCLS  
367 435/7.2/CCLS  
L2 4437 435/4,6,7.1,7.2/CCLS  
(435/4 OR 435/6 OR 435/7.1 OR 435/7.2)/CCLS)

=> s 436/172,518/ccls  
808 436/172/CCLS  
1471 436/518/CCLS  
L3 2221 436/172,518/CCLS  
(436/172 OR 436/518)/CCLS)

=> s cassette# or kit# or article# or system or apparatus  
33095 CASSETTE#  
25454 KIT#  
219923 ARTICLE#  
1030233 SYSTEM  
807613 APPARATUS  
L4 1435303 CASSETTE# OR KIT# OR ARTICLE# OR SYSTEM OR APPARATUS

=> s electrochemiluminescence or ECL  
44 ELECTROCHEMILUMINESCENCE  
3795 ECL  
L5 3811 ELECTROCHEMILUMINESCENCE OR ECL

=> s 14 and 15  
L6 2811 L4 AND L5

=> s 16 and electrode#  
196328 ELECTRODE#  
L7 464 L6 AND ELECTRODE#

=> s (l1 or l2 or l3) and 17  
L8 30 (L1 OR L2 OR L3) AND L7

=> d 18 1-30

1. 5,643,713, Jul. 1, 1997, Electrochemiluminescent monitoring of compounds; Pam Liang, et al., 435/4, 7.1, 7.2, 7.32, 7.72, 18, 29, 34, 39; 436/4; 549/34 :IMAGE AVAILABLE:

2. 5,641,623, Jun. 1997, **Electrochemiluminescence assay**; Mark T. Martin, **435/4**; 424/1.09; **435/7.1**, 7.2, 7.32, 7.72, 18.29, 34, 39; 549/34 :IMAGE AVAILABLE:

3. 5,635,347, Jun. 3, 1997, Rapid assays for amplification products; John R. Link, et al., **435/6**, 91.2, 91.5; 436/164, **172**; 536/24.3; 935/8, 17, 77, 78 :IMAGE AVAILABLE:

4. 5,632,957, May 27, 1997, Molecular biological diagnostic systems including **electrodes**; Michael J. Heller, et al., 422/68.1, 50, 52, 55, 56, **61**, 62, 63, 67, 69, 81, 82.01, 82.02, 82.03, 82.04, 82.05; **435/6**, **7.1**, 173.1; 436/501; 536/22.1, 23.1, 24.1; 935/77, 78, 88 :IMAGE AVAILABLE:

5. 5,632,956, May 27, 1997, **Apparatus** and methods for carrying out **electrochemiluminescence** test measurements; Ali Ghaed, et al., **422/52**; 366/208, 212, 216, 219; 422/64 :IMAGE AVAILABLE:

6. 5,624,637, Apr. 29, 1997, **Apparatus** and methods for carrying out **electrochemiluminescence** test measurements; Ali Ghaed, et al., **422/52**; 324/71.1; 435/287.1 :IMAGE AVAILABLE:

7. 5,610,075, Mar. 11, 1997, Competitive **electrochemiluminescence** assays for endotoxins using a ruthenium label; Marianne Stahl-Rees, 436/501; **422/52**; 436/149; 514/15 :IMAGE AVAILABLE:

8. 5,610,017, Mar. 11, 1997, Method for conducting a polymerase chain reaction using an improved electrochemiluminescent label; Satyanarayana R. Gudibande, et al., **435/6**; 428/917; 435/91.1, 91.2, 183; 436/94, 800, 805, 905; 536/23.1, 24.32, 24.33, 25.3; 935/77, 78 :IMAGE AVAILABLE:

9. 5,597,910, Jan. 28, 1997, Electrochemiluminescent label for DNA probe assays; Satyanarayana R. Gudibande, et al., 536/24.3; 250/361C; 252/301.16; **435/6**, 91.1; 436/800, 801; 536/25.3, 25.32 :IMAGE AVAILABLE:

10. 5,591,581, Jan. 7, 1997, Electrochemiluminescent rhenium moieties and methods for their use; Richard J. Massey, et al., **435/6**, 5, 7.2, 235.1, 325, 410; 436/537; 530/350, 400; 546/2; 556/45, 46, 49 :IMAGE AVAILABLE:

11. 5,589,136, Dec. 31, 1996, Silicon-based sleeve devices for chemical reactions; M. Allen Northrup, et al., **422/102**, 82.05, 82.09, 129, 131; 435/285.1, 292.1 :IMAGE AVAILABLE:

12. 5,550,021, Aug. 27, 1996, Allelic diagnosis of susceptibility to compulsive disorder; Kenneth Blum, et al., **435/6**, 91.1, 91.2, 810; 536/23.1, 23.5, 24.31, 24.33; 935/76, 77, 78 :IMAGE AVAILABLE:

13. 5,543,112, Aug. 6, 1996, **Apparatus** and methods for carrying out **electrochemiluminescence** test measurements; Ali Ghead, et al., **422/52**; 250/361C; 324/71.1; 422/81 :IMAGE AVAILABLE:

14. 5,541,113, Jul. 30, 1996, Method for detecting an analyte using an electrochemical luminescent transition metal label; Iqbal W. Siddigi, et al., 436/56; **422/52**, 82.05, 82.06, 82.08; 436/164, **172** :IMAGE AVAILABLE:

15. 5,538,687, Jul. 23, 1996, **Apparatus** for generating optically detectable signals by applying electrical potentials to sample liquids; Holger Kotzan, et al., **422/52**; 250/361C; 422/82.05 :IMAGE AVAILABLE:

16. 5,527,710, Jun. 18, 1996, Rate measurements of biomolecular reactions using **electrochemiluminescence**; Laurette Nacamulli, et al.,

436/517; **422/52**, 82.01, 82.05, 82.08; **435/4**, 6, 7.1, 7.5;  
436/149, **172**, 501, 502, 537, 544, 546 :IMAGE AVAILABLE

17. 5,466,416, Nov. 14, 1995, **Apparatus** and methods for carrying out  
**electrochemiluminescence** test measurements; Ali Ghaed, et al.,  
**422/52**; 250/361C, 362, 369; 324/71.1; 422/81, 82.08, 82.09; 435/808  
:IMAGE AVAILABLE:

18. 5,453,356, Sep. 26, 1995, Luminescent metal chelate labels and means  
for detection; Allen J. Bard, et al., **435/6**, 7.1, 7.2, 7.31;  
436/84, **172**, 500, 501, 517, **518**, 536, 544, 547, 548, 805, 806  
:IMAGE AVAILABLE:

19. 5,310,687, May 10, 1994, Luminescent metal chelate labels and means  
for detection; Allen J. Bard, et al., **436/518**; 422/50, **52**, 82.05,  
82.08; **435/4**, 5, 6, 7.1; 436/512, 519, 525, 536, 537, 544,  
546, 548, 904, 905; 544/225; 546/2 :IMAGE AVAILABLE:

20. 5,308,754, May 3, 1994, Electrogenerated luminescence in solution;  
Jouko J. Kankare, et al., 435/7.4, 7.1, 968; **436/172**, **518**,  
525, 805, 806 :IMAGE AVAILABLE:

21. 5,296,191, Mar. 22, 1994, Method and **apparatus** for conducting  
electrochemiluminescent measurements; Lee O. Hall, et al., **422/52**;  
250/361C; 324/71.1; **436/172** :IMAGE AVAILABLE:

22. 5,247,243, Sep. 21, 1993, Method and **apparatus** for conducting  
electrochemiluminescent measurements; Lee O. Hall, et al., 324/71.1;  
250/361C; **422/52**; **436/172** :IMAGE AVAILABLE:

23. 5,240,863, Aug. 31, 1993, Method of measuring immunoreactant using  
**electrochemiluminescence**; Akira Shibue, et al., 436/526, **518**,  
524, 525, 527, 531, 532, 533, 534 :IMAGE AVAILABLE:

24. 5,238,808, Aug. 24, 1993, Luminescent metal chelate labels and means  
for detection; Allen J. Bard, et al., **435/4**, 5, 6, 7.1;  
436/500, 543, 805, 806; 530/391.5, 402; 544/225; 546/2, 10, 12; 548/101,  
109 :IMAGE AVAILABLE:

25. 5,221,605, Jun. 22, 1993, Luminescent metal chelate labels and means  
for detection; Allen J. Bard, et al., **435/4**, 5, 6, 7.1;  
436/500, 543, 805, 806; 530/391.5, 402; 544/225; 546/2, 10, 12; 548/101,  
109 :IMAGE AVAILABLE:

26. 5,147,806, Sep. 15, 1992, Method and **apparatus** for conducting  
**electrochemiluminescence** measurements; Ralph A. Kamin, et al.,  
436/149; **422/52**, 81; 435/808; **436/172** :IMAGE AVAILABLE:

27. 5,093,268, Mar. 3, 1992, **Apparatus** for conducting a plurality of  
simultaneous measurements of electrochemiluminescent phenomena; Nicholas  
Leventis, et al., **436/172**; 250/361C, 362, 459.1, 484.2; **422/52**,  
68.1, 82.07, 82.08 :IMAGE AVAILABLE:

28. 5,068,088, Nov. 26, 1991, Method and **apparatus** for conducting  
electrochemiluminescent measurements; Lee O. Hall, et al., **422/52**;  
250/361C; 313/498; 324/94; 327/100 :IMAGE AVAILABLE:

29. 5,061,445, Oct. 29, 1991, **Apparatus** for conducting measurements  
of electrochemiluminescent phenomena; Glenn Zoski, et al., **422/52**;  
250/361C; 327/172, 514 :IMAGE AVAILABLE:

30. 4,431,919, Feb. 14, 1984, Detection **apparatus**, particularly for  
use in liquid chromatography; Heiner Kostlin, et al., 250/361C; 73/61.58;  
**422/52**, 70 :IMAGE AVAILABLE:

=> d 18 5,6,13,15,17,21,26,29 ab

US PAT NO: 5,632,956 :IMAGE AVAILABLE:

L8: 5 of 30

ABSTRACT:

An **apparatus** for agitating an electrochemiluminescent test sample in a sample container having a mouth for permitting withdrawal of the electrochemiluminescent test sample therefrom and a body extending away from the mouth. The **apparatus** includes a base, a first member movably mounted with respect to the base and including a first engaging mechanism for engaging the body of the sample container at a first position, and a second member fixedly mounted with respect to the base and including a second engaging mechanism for engaging the body of the sample container at a second position between the first position and the mouth thereof. In this **apparatus**, a first motive mechanism is provided for moving the first member so that at least a portion of the sample container adjacent to the first position thereof together with the electrochemiluminescent test sample therein is agitated in response to the motion of the first member.

US PAT NO: 5,624,637 :IMAGE AVAILABLE:

L8: 6 of 30

ABSTRACT:

An **apparatus** for conducting **electrochemiluminescence** test measurements consisting of a fluid container having a fluid flow path, a first counter **electrode** positioned within the fluid container directly secured to a transparent mounting block and having an **electrode** surface exposed to fluids within the fluid flow path, a working **electrode** with an **electrode** surface being displaced from the **electrode** surface of the first counter **electrode** laterally with respect to the flow direction of fluid within the fluid flow path.

US PAT NO: 5,543,112 :IMAGE AVAILABLE:

L8: 13 of 30

ABSTRACT:

An **apparatus** for conducting measurements of **electrochemiluminescence** including a movable sample container support in the form of a carousel having a plurality of spaced apart support positions, an **electrochemiluminescence** testing device, a motor **system** to move the sample container support in a predetermined sequence, a sample transfer device to transfer sample from containers in the support positions to the testing device, and a detection **system** to detect the presence of a sample container and to produce an actuation signal based on the detected presence of the sample container.

US PAT NO: 5,538,687 :IMAGE AVAILABLE:

L8: 15 of 30

ABSTRACT:

The invention addresses a measuring cell and a process for carrying out **electrochemiluminescence** measurements (**ECL**). The measuring cell has a sample space in which there are disposed a working and a counter **electrode**. The counter **electrode** is disposed such that it is located in the light path between the working **electrode** and the optical detector.

US PAT NO: 5,466,416 :IMAGE AVAILABLE:

L8: 17 of 30

ABSTRACT:

An **apparatus** as provided for use in carrying out **electrochemiluminescence** test measurements. The **apparatus** includes a cell to contain an **electrochemiluminescence** sample fluid. A working **electrode** is provided within the cell and is coupled to a supply of electrical energy to apply the same to the sample fluid. A temperature effect adjustment **system** serves either to adjust a temperature of the **electrochemiluminescent** sample fluid so that it is

within a predetermined range, or else adjusts an output signal representing light produced through electrochemiluminescence of the sample fluid based on the temperature of the sample fluid.

US PAT NO: 5,296,191 :IMAGE AVAILABLE:

L8: 21 of 30

ABSTRACT:

A method and **apparatus** for triggering and measuring electrochemiluminescent phenomena using a voltage waveform applied at the voltammetric working **electrode** which improves the precision and accuracy of measurements. This waveform has a decreasing scan rate in the range of voltages for which **electrochemiluminescence** is triggered and is substantially sinusoidal in shape in this range. The waveform results from locating the reference **electrode** of a potentiostat in close potential proximity to its counter **electrode**, and applying a uniform scanning voltage waveform at the reference **electrode**. The waveform also can be synthesized digitally, converted to analog form, and applied directly to the working **electrode** with the reference **electrode** in close potential proximity to the working **electrode**.

US PAT NO: 5,147,806 :IMAGE AVAILABLE:

L8: 26 of 30

ABSTRACT:

A method and **apparatus** for conducting **electrochemiluminescence** (**ECL**) measurements which control the initial conditions relating to the surface state of a triggering working **electrode** by reproducibly creating and maintaining a favorable surface condition so as to enhance the precision and detection limit of the measurements. Assays are performed with **ECL** detection in a flow-through cell environment and the precision and detection limit are enhanced by alternating initialization and measurement steps.

US PAT NO: 5,061,445 :IMAGE AVAILABLE:

L8: 29 of 30

ABSTRACT:

An **apparatus** for conducting measurements of electrochemiluminescent (**ECL**) phenomena includes a cell unit having an **electrode** configuration for inducing the emission of **ECL** light by the application of a selected voltage waveform to a sample fluid including an **ECL** moiety. The sample fluid is transported to and from the cell unit by a flow-through pump/tubing **system**. A photomultiplier tube detects the intensity of light emitted by the sample fluid during the **ECL** measurement process. A computer control unit both analyzes the detected data and provides digital control signals to the cell unit to generate effective voltage waveforms. The digital control signals are supplied to a novel pulse width modulated digital to analog converter which outputs a ramp voltage waveform having the desired slope.